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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,951	02/10/2006	Munetoshi Kawamura	11A3827PCT	7498
3713	7590	10/21/2009	EXAMINER	
QUINN EMANUEL KODA & ANDROLIA 865 S. FIGUEROA STREET, 10TH FLOOR LOS ANGELES, CA 90017			ANDERSON, JERRY W	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			10/21/2009 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/567,951

**Applicant(s)**

KAWAMURA, MUNETOSHI

**Examiner**

JERRY W. ANDERSON

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 21 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Examiner acknowledges the receipt of the Applicant's Amendment, mailed 7/21/2009. Claims 1-4 amended, claims 12-16 new, claims 1-4, 12-16 pending.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 12, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "electrons in dissolved oxygen ... are stabilized" in claim 1 is a relative term which renders the claim indefinite. The term "electrons in dissolved oxygen ... are stabilized" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear as to the meaning of the term stabilized as applied to the electrons of dissolved oxygen, or as to which electrons are being affected, or how the effect is expressed, nor what the ultimate result will be.
5. The term "a pH value thereof set high" in claim 12 is a relative term which renders the claim indefinite. The term "a pH value thereof set high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear if the pH set high refers to a basic solution,

wherein the pH value is greater than 7, or if the Hydrogen ion concentration is high, an acidic solution. Further, the amount of increase is likewise unknown.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**7. Claims 1-4, and 13-16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, K., JP 62-297677**

8. Regarding claim 1, Ogawa discloses the claimed invention including a shelf in a refrigerator, (¶ 1, pg. 5, claim 2, '677) having a food on the shelf, (¶ 1, pg. 4, '677) having a heat pump to cool the refrigerator/freezer, (¶ 2, pg. 3, '677) applying an AC and DC voltage simultaneously to the food, (¶ 1, pg. 4, claim 5, '677) wherein the DC voltage is negative. (¶ 1, pg. 5, '677) Ogawa is silent as to placing the food on the shelf, and cooling the interior of the refrigerator, however one of ordinary skill in the art at the time of the invention would have found it obvious to place the food on the food shelves of Ogawa's refrigerator, to use the heat pump mechanism of the refrigerator/freezer to cool or freeze the food, and to use the disclosed device as intended.

9. Further, claim 1 is a method claim, containing a series of steps, housing, placing, cooling and storing, of food, but the term added by amendment, is not a method step, but states the effect of the steps upon the food. Examiner submits that if

the steps of the method are met, as above, then the results as anticipated by the applicant are satisfied, i.e. must be inherent barring any evidence to the contrary.

10. Claims 2, 3, and 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, K., JP 62-297677, for the reasons stated in the previous office action mailed 3/23/2009.

11. Regarding claim 13, Ogawa discloses the claimed invention, as discussed above, although Ogawa is silent as to the magnitude of the DC and AC voltage, the same language is used to describe both, "direct or alternating current high voltage electrical field". (¶ 1, pg 4. '677) Logically, in the absence of further limitation, it would have been obvious to one of ordinary skill in the art that the alternating current voltage and the direct current voltage are of similar magnitude.

12. Regarding claim 14, Ogawa discloses the claimed invention, as discussed above, including, a shelf in a refrigerator, (¶ 1, pg. 5, claim 2, '677) having a food on the shelf, (¶ 1, pg. 4, '677) having a heat pump to cool the refrigerator/freezer, (¶ 2, pg. 3, '677) applying an AC and DC voltage simultaneously to the food, (¶ 1, pg. 4, claim 5, '677) wherein the DC voltage is negative. (¶ 1, pg. 5, '677) applying either a direct of alternating current high voltage electrical field (¶ 1, pg. 4, '677) for a set duration of time whenever the door is closed. (¶ 2, pg. 5, '677)

13. Regarding claims 15 and 16, Ogawa discloses the claimed invention, as discussed above, including applying an AC and DC voltage simultaneously to the food, (¶ 1, pg. 4, claim 5, '677) wherein the DC voltage is negative. (¶ 1, pg. 5, '677) applying either a direct of alternating current high voltage electrical field (¶ 1, pg. 4,

'677) and optionally applying a high voltage electrical voltage to the food. (¶ 2, pg. 4, '677) It would have been obvious to one of ordinary skill in the art that if the voltage could be optionally applied, that any voltage scheme could be used, including both AC and DC, either or none. As to the temperature of -20°C, it would have been obvious to one of ordinary skill in the art that this is the standard recommended temperature for freezers, or in Fahrenheit, -4°F.

**14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, K., JP 62-297677 in view of Yamamoto, H., JP-05-306414.**

15. Ogawa is taken as above:

16. Yamamoto ('414) discloses:

a. pH to go up and is said to miniaturize and activate a cluster, . . . property modification of dissolved oxygen and chlorine . . . dispersed and carried out, (¶ 124, '414)

17. Regarding claim 12, Ogawa discloses the claimed invention, as discussed above, but lacks increased pH and the effect thereof, Yamamoto teaches the effect of the voltage field and increased pH upon the dissolved oxygen and ions in the water. (¶ 124, '414)

18. Ogawa and Yamamoto are analogous art in that both are concerned with the use of high voltage and cold temperatures on comestibles for human consumption.

19. It would have been obvious to include the increased pH of Yamamoto in the electrical and cold preservation techniques of Ogawa in order to improve storage qualities of perishables. (abstr. '414)

***Response to Amendment***

20. The applicant having amended claims 1-4, and adding claims 12-16, the 35 USC § 112 rejections of claims 1 and 12 is therefore necessitated.

***Response to Arguments***

21. Applicant's arguments filed 7/21/2009 have been fully considered but they are not persuasive.

22. Regarding the applicant's first argument, the fact that Ogawa does not address claim 1 as amended, nor claim 12's increased pH, nor the changes in applied voltages of claims 13-16, examiner has addressed these arguments in the instant response, see above.

23. As to the applicant's statement that Ogawa teaches only the presence of electrical fields between the shelves, and not the direct application of voltage to the food item, Ogawa states the voltage is applied to the shelves, and the food is placed on the shelves. It would have been obvious to one of ordinary skill in the art for the applicant's argument to be valid, i.e. to subject the food to the electrical field only, without the

voltage, it would have been necessary to isolate the food from the shelf, by some insulation, and even then, since there is no current flow through the food, only the application of voltage, even insulation could not deny the charge accumulation on the food articles, through the insulation, and thus identical situation as the applicant's effect on the food would occur.

### ***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

25. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY W. ANDERSON whose telephone number is (571)270-3734. The examiner can normally be reached on 7 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. SAYALA/  
Primary Examiner, Art Unit 1794

Jwa